

For Better and For Worse: Three Lending Relationships

Mitchell Berlin*

When bankers speak of building a relationship with a business customer these days, they usually mean selling the customer a whole range of financial products such as lock-boxes, letters of credit, and swaps, in addition to loans. When financial economists speak of *relationship lending* between banks and firms, they usually have a different, more old-fashioned idea in mind. They mean a close relationship between a firm and its banker, in which a single banker has intimate knowledge about the firm's affairs, built up over years of lending. Economists distinguish this type of lending from the more

anonymous *arm's-length lending*, in which institutions and individuals provide funds to firms by purchasing their public securities (stocks and bonds).

Over the last 10 years, financial economists have accumulated a significant body of empirical knowledge about the advantages and disadvantages of relationship lending. Their empirical studies have provided insights into some basic questions: Are close, long-term relationships between borrowers and lenders feasible in an increasingly competitive financial marketplace? How do relationships that have developed between banks and firms change when firms gain access to alternative funding sources, especially public securities markets? Can firms

*Mitchell Berlin is a senior economist and research advisor in the Research Department of the Philadelphia Fed.

gain the best of both worlds by a judicious mixture of bank and public borrowing?

For firms making financial decisions or banks gauging their markets, these are clearly important questions. These questions are also important ones for policymakers. In developing countries and formerly communist countries—where financial systems are being created from scratch—these are precisely the types of questions that policymakers must confront when they weigh the relative merits of a bank-oriented financial system, like that of Japan, and a securities-oriented financial system, like that of the United States. Even in the sophisticated and highly competitive financial markets of countries like the United States, public policy affects the types of banking relationships that firms and banks form. For example, recent legislative proposals to provide subsidies to promote a secondary market for small business loans—much like the secondary market for mortgages—may increase smaller firms' access to securities markets and loosen their relationships with banks. Understanding the economics of lending relationships between banks and firms can illuminate such policy debates.¹

EXCLUSIVE RELATIONSHIPS CAN EASE CREDIT FOR SMALL FIRMS

Long-Term Exclusive Relationships Are Beneficial... Midget Widget is a small Midwestern firm with sales of \$10 million and a simple financial structure.² Midget has only two sources of external funds. Many of the firm's input suppliers offer trade credit; for example,

Midget's supplier of elbow sockets accepts payment 30 days after delivery. Midget also borrows on a continuing basis from Little Bank on the Prairie. Although Midget was started with a prayer and a loan from the owner's brother-in-law nearly 14 years ago, the firm has been taking out—and repaying—business loans from Little Bank for 10 years.

Over this 10-year period, Midget's borrowing terms have gotten better and better. At the outset, Midget was still struggling to establish its niche in the widget market and was barely profitable. But Midget has yet to miss a payment to its trade creditors or its owner's brother-in-law. When the firm first applied to Little Bank for a loan, a loan officer from the bank performed an especially careful analysis of Midget's books, made phone calls to the firm's trade creditors to ask about the firm's repayment history, and visited the widget plant to inspect the firm's inventories. In fact, this visit was only the first of many regular visits to the plant by the loan officer in charge of Midget's account.

After some careful discussions by the bank's lending committee, Little Bank decided that Midget was a good credit risk, in part because of its exemplary repayment history, but primarily because it was a promising business that had strong future prospects. The lending committee also decided that rather than burden Midget with very high loan payments at the outset—which might backfire and push the firm into early default—the bank would charge a loan rate of only prime plus 3 percent. This rate was not high enough to cover Little Bank's initial costs of investigating the firm plus its own funding costs (mainly the costs of paying de-

¹This article focuses on the empirical literature on bank lending in the United States. I have not always referenced seminal papers when later papers contain good discussions of the preceding literature. See the article by Sudipto Bhattacharya and Anjan Thakor for an excellent critical review of the theoretical literature, and the one by Leonard Nakamura for a discussion of both the empirical and theoretical literature.

²The story of Midget Widget is based primarily on three important articles, one by Allen Berger and Gregory Udell and two by Mitchell Petersen and Raghuram Rajan. Midget and all other firms and banks in this article are fictional, as are their stories.

positors), but the loan committee reasoned that these costs would be made up over time. Midget was a rapidly growing business, and Little Bank's lending committee agreed that even though the loan was risky, it was likely to be just the first in a series of future, more profitable loans.

But the initial nonprice contract terms were *very* stringent, designed to give Little Bank lots of leeway to intervene to protect its money. The loan was structured as a one-year commitment—so after only one year the bank could freely reevaluate the firm's creditworthiness—and Midget was required to post its accounts receivable as collateral. In fact, payments by those firms receiving trade credit from Midget were made straight to the bank, rather than to Midget. In addition, the loan agreement included numerous restrictive covenants, including the bank's right to veto asset sales by the firm and strict requirements that Midget limit borrowings from other sources.

Now, in the 10th year of this borrowing relationship, Midget's loan terms are much more attractive than at the outset. The firm now borrows at prime plus 1 percent, instead of the prime plus 3 percent that it paid initially. Instead of a one-year loan commitment, Midget now has a three-year commitment. Although the contract still has restrictive covenants, Midget's loan commitment is no longer collateralized, and the firm now receives all payments directly from its customers.

Midget can now borrow both more cheaply and without such intrusive bank controls because its default risk has dropped over time. Firms that fail are most likely to fail in their first few years of operation. After 14 years, it's clear that Midget is not a fly-by-night firm with a high risk of default. Also, it's now *cheaper* for Little Bank to lend to Midget. Over the last 10 years, the bank has developed expertise in understanding Midget's financial needs and problems, so new loan agreements and adjustments to old ones do not trigger the same in-

tensive evaluation as they did at the outset. Moreover, keeping close tabs on collateral is time-consuming, so a bank's lending costs fall when it feels secure enough to lend without collateral.

More attractive contract terms are not the only benefit of the firm's long-term relationship with the bank. Midget's owner feels fortunate to have received a loan commitment at all this year. The regional economy is weak, and as the regional market goes, so goes the market for widgets. Other area firms that have been in business at least as long as Midget have simply been unable to get a loan on *any* terms from a bank. But, unlike Midget, many of these firms have not had a long-term, exclusive relationship with a single bank. Little Bank's knowledge of the ins and outs of Midget's financial condition—through good times and bad—allows the bank to see Midget's fundamental strengths despite the local economic problems. Little Bank also feels a commitment to help Midget through difficult times.

...But Relationships Are Harder to Form in Highly Competitive Loan Markets. From Little Bank's viewpoint the relationship has developed much as the lending committee had hoped initially. The low initial loan rates (relative to the firm's risk of default) and high costs of monitoring Midget at the outset of the relationship—which initially yielded low profit margins—have been replaced by years of handsomely profitable loans. These continuing profits are rooted partly in the knowledge and expertise that Little Bank has built up over its 10-year relationship with Midget. Little Bank's greater experience in lending to Midget gives it an advantage over potential competitors for Midget's business, all of whom would find it expensive to reproduce Little Bank's knowledge in a reasonable amount of time. As its own costs of lending to Midget have fallen, Little Bank has passed on some of the cost reduction to Midget through a lower loan rate (and more relaxed contractual controls) and kept some of

the cost reduction for itself as higher profit. Even as Little Bank makes profits, it is hard for any competitor to offer Midget a better deal.³

Just how much profit Little Bank can keep as its lending costs fall—and how Midget's loan rate evolves over time—depends mainly on the number and behavior of Little Bank's competitors, including both banks and nonbank lenders (such as finance companies). When competition in the loan market is weak and the bank doesn't have to worry so much about a competitor's stealing its customer, the bank can take the entire future customer relationship into account when making a loan-pricing decision in a given period. As in Midget's case, a bank can profitably charge loan rates *below* (risk-adjusted) lending costs at the outset of the relationship—to keep the risk of early default by their risky borrowers low—knowing that it will be able to charge rates *above* lending costs as the relationship continues. In markets where competition is weak, the loan rate charged to a customer typically starts low and falls relatively slowly as lending costs fall over the life of the lending relationship. In more competitive loan markets, each bank will be more concerned about a competitor's stealing its customer at any time, which puts strong pressure on the

Banks in highly competitive loan markets don't have the luxury of taking temporary losses in the expectation of charging relatively high rates in the future.

bank to cover its lending costs *period by period*. Banks don't have the luxury of taking temporary losses in the expectation of charging relatively high rates in the future. So, in highly competitive markets, the loan rate charged to a customer usually starts high and falls more swiftly over the life of the lending relationship.

In Midget's view, more competition would certainly be welcome, as it would put pressure on Little Bank to lower its loan rate now. While grateful for Little Bank's initial commitment of funds and resources, Midget now views itself as an established firm that deserves low rates. But in Little Bank's view, its own current profits are merely compensation for its heavy initial expenditures on evaluating and monitoring

Midget's credit risk and for the relatively low loan rates that it charged Midget when it was only four years old and a relatively high-risk firm. Moreover, Little Bank would argue that it wouldn't have been willing to make such a risky loan *in the first place* without the expectation of high profits in succeeding years. And Midget might have had to wait until it had a longer track record to get outside funding.

An important lesson of Midget's story is that greater competition in loan markets can have complicated and surprising effects. Clearly, competition limits a bank's ability to increase loan rates and profits at borrowers' expense. But it also creates difficulties in building long-term relationships. In particular, it may be difficult for banks to make risky loans—for example, when firms are young and desperately in need of credit—unless the bank expects that it will ultimately profit over the life of the lending relationship. Both the competitive advan-

³Economists would say that Midget is *locked into* its relationship with Little Bank, because the bank has an information advantage over its competitors. Of course, other banks might learn something about Midget's creditworthiness based on Little Bank's willingness to make a loan. But as long as Little Bank's credit-granting decision does not completely reveal all relevant information about Midget, Midget will be locked in.

tage held by an incumbent bank, because of its prior relationship with the firm, and relatively noncompetitive loan markets increase the bank's profits over the life of a lending relationship.⁴

RELATIONSHIPS BECOME LESS EXCLUSIVE AS FIRMS BECOME LARGER

Exclusive Relationships Create Tensions. Middle Marketing (popularly known as 2M) is a closely held firm with \$50 million in sales, and it has been borrowing from Regional Bank for 15 years. Regional has been 2M's sole banker and, other than trade credit from its suppliers, 2M's only source of outside funds. While the relationship with Regional has been mutually beneficial, 2M is not completely satisfied. In fact, the firm's Treasurer has become increasingly dissatisfied as he has fielded phone call after phone call from Regional's competitors, who are also seeking to expand their presence in the middle market, and from investment bankers who are trying to convince 2M to go public.⁵

Although 2M no longer has to post collateral on its loans, its three-year loan agreement still has extensive covenants and contractual controls that the firm finds increasingly intru-

sive. Of course, 2M can always phone its account manager at Regional to request a temporary waiver or renegotiation of a covenant. For example, last year when new equipment purchases threatened to reduce 2M's liquid assets on hand and push its working capital (cash plus accounts receivable) below the minimum level stipulated in the loan contract, 2M's owner called Regional. After a review of 2M's books and some further discussions to make sure that the fall in 2M's working capital was not due to other, more ominous causes, Regional offered a temporary waiver of the covenant.⁶

But renegotiations are not always easy. Sometimes, Regional has demanded an increase in the loan rate in exchange for a relaxation of the covenant. Sometimes, Regional has demanded an offsetting tightening of another covenant. For example, during the last negotiations, although Regional allowed 2M's working capital to fall below the level usually considered prudent in the industry, it also demanded a reduction in the firm's debt-to-equity ratio. In fact, Regional and 2M have not always seen eye to eye about the risks of 2M's operating decisions, and the bank has not always agreed to contractual changes on any terms. Had Regional viewed 2M's recent decline in working capital as too risky, negotiations could easily have turned out unsuccessfully for 2M.⁷ In this case, the firm might have been forced to postpone the equipment purchase or to search for another banker willing to provide funds (after duplicating Regional's investigation of the

⁴This should *not* be interpreted as an argument that greater competition is a bad thing and should be discouraged, but only that there are both benefits and costs. In addition, monopoly profits are not the only way that a bank can receive compensation for its initial commitment of resources to a firm. For example, some economists have argued that holding equity stakes in firms could serve a similar function for a bank, even in highly competitive loan markets. This would require changes in laws that separate banking and commerce, which severely restrict bank equity positions in firms that are not in financial distress. Such legal changes might have complicated and far-reaching effects. For example, see the article by Loretta Mester.

⁵The middle market is a fairly nebulous place. Many commentators would say that it's populated by firms with sales between \$50 million and \$500 million in sales, but other numbers are often used.

⁶My account of renegotiations relies heavily on the articles in "A Forum on the Effects of Violating Debt Covenants," in the *Accounting Review*.

⁷Even when both the bank and the firm agree about the underlying riskiness of an operating decision, they may disagree about the desirability of the decision. As a creditor with a fixed claim, the bank has a tendency to be especially wary of risky decisions, because it does not share in the high returns when the decision turns out especially well.

firm's finances). Either outcome would have been costly for the firm.

To Reduce Lender Power, Larger Firms Often Seek to Diversify Their Sources of Funds...By diversifying the firm's funding sources, 2M's owner feels that she would gain more discretion over production and investment decisions and also more bargaining power in negotiations with Regional. One possibility is that 2M could simply borrow from multiple banks, including Regional. Another possibility—which entails more fundamental changes in the ways that the firm does business—is that 2M could sell securities to the public in an initial public offering (IPO). 2M is now large enough to bear the costs of selling public securities, which include the substantial and ongoing costs of providing information both to investors and to the SEC, as well as the fees paid to the underwriting firm that brings the company's securities to market. Since 2M's owner has been looking to diversify her personal portfolio by reducing her large stock holding in the firm, 2M elects an IPO.

...But Large Firms' Public Security Holders Continue to Value Bank Relationships. Although the decision to sell public securities will ultimately weaken the intensity of 2M's relationship with Regional (indeed, this is one of the reasons for 2M's decision), the firm will continue to benefit from maintaining a lending relationship. In fact, one of these benefits will be felt immediately.

One of the enduring empirical puzzles in financial economics is that stock sold in an IPO seems to be *underpriced*, in the sense that the initial buyers can turn around and resell the stock at a higher price. There is no consensus about why IPOs are underpriced, but most economists believe that it's related to investors' uncertainty about the quality of a firm new to public markets; thus, less uncertainty about the firm's prospects would reduce the amount of underpricing.

This is just what 2M's relationship with Re-

gional appears to do. Otherwise suspicious investors act as if they view a prior borrowing relationship with a bank as good news about the firm, a type of Good Housekeeping Seal of Approval, which reduces their uncertainty about the firm's future prospects. 2M can reasonably expect that its own stock will sell at a higher initial price than that of a similar firm that doesn't have an ongoing relationship with a bank. So, in 2M's case, the extent of underpricing is likely to be reduced, which is good for 2M, since the firm will get more funds from investors when it sells its securities.⁸

After 2M has gone public, its relationship with Regional will continue to affect the price of its public securities. This is true even though a firm with publicly traded securities must disclose a lot of information about its business affairs so that investors and analysts can form their own opinions and make their own forecasts about the firm's prospects. Investors will continue to react whenever 2M renews or renegotiates its loan commitment with Regional. As long as the new contractual terms do not indicate a worsening of 2M's financial situation—say, a higher rate than in the previous loan commitment—2M's stock price will typically rise with the public announcement of the new loan contract.

This positive stock-price reaction to announcements of bank loans and loan commitments—an effect that has been found in study after study—stands in sharp contrast to the usually insignificant or negative effect of the announcement of a new public debt issue.⁹

⁸The evidence about bank relationships and IPOs can be found in two articles, one by Christopher James and Peggy Weir and another by Myron Slovin and John Young.

⁹The positive stock price effect when a loan agreement is announced is significant only when the number of banks lending to the firm is small (as discussed in the next section).

Investors' willingness to pay more for the firm's stock suggests that they view the renewal of the loan relationship (on favorable terms) as good news about its future prospects, either because the bank's information about the firm's condition is superior to that of other investors—*bank certification*—or because the firm's stockholders believe that close supervision by the bank of the firm's affairs is likely to improve the firm's performance—*bank monitoring*.

The positive effect of such an announcement has been found to be strongest when markets are uncertain about the firm's prospects—for example, when stock analysts have substantial disagreements about the firm's future earnings—or if the firm's stock price has been low and investors have been pessimistic about the firm's earnings prospects. This effect has also been found to be strongest when the *bank's* credibility—as measured by its credit rating—is greatest. All of these findings support the idea that investors place a value on the lending relationship.¹⁰

The story of 2M illustrates that the nature of the lending relationship changes over a firm's life-cycle. The tensions of exclusive lending relationships create powerful pressures for firms to diversify their funding sources when they become large enough. Further, the lend-

ing relationship itself eases the transition from exclusive borrowing from a single bank to diversified funding, especially borrowing on public markets. But even when a firm secures funds from public securities markets, there is a pay-off to the firm that maintains ties with its banker, because the banking relationship continues to convey information to investors.

A FIRM'S ACCESS TO PUBLIC DEBT REDUCES THE BANK'S FLEXIBILITY

While the empirical evidence says that banks play a continuing role in evaluating and monitoring firms with public securities—at least until the firm reaches a very large size—another aspect of the lending relationship seems to undergo a fundamental change when the relationship becomes less exclusive. The ease of renegotiating bank loans, often seen as one of the hallmarks of lending relationships, appears to suffer.

One piece of evidence that illustrates this loss of flexibility is that the positive stock-price effect of a loan announcement depends on there being a small number of lenders. Many firms borrow from a syndicate of banks: one bank negotiates the loan commitment agreement on behalf of a number of other banks, but all members of the syndicate must ratify any adjustments in the loan agreement. When the loan agreement involves a syndicate of more than three banks, the positive effect of the loan announcement on the firm's stock price disappears.¹¹ This finding makes sense because it is more difficult to renegotiate loans with a syndicate of banks than with just one or two banks; monitoring and controlling the firm through

¹⁰A thorough review of the literature on the stock-price effects of loan agreement announcements can be found in the article by Matthew Billet, Jon Garfinkel, and Mark Flannery. This article also performs an especially careful reexamination of prior findings. Notably, the authors call into question two earlier findings. Initial evidence indicated that only bank loans—and not other types of private debt—have positive announcement effects. Billet, Garfinkel, and Flannery summarize and add to the mounting evidence that all types of private debt have positive announcement effects. They also cast serious doubt on the prevailing belief that announcement effects are significant only for renewals and renegotiations of loan agreements, but not for first-time agreements between firms and banks. Instead, they find that announcement effects are positive and significant for both renewals and first-time agreements.

¹¹The empirical evidence on the stock-price effect of loan commitments by lending syndicates can be found in the article by Diana Preece and Donald Mullineaux. Their article considers—and rejects—a number of alternative explanations for the insignificant stock-price effects of large syndicated loans.

covenants is much more valuable when contractual terms can be readily revised as new information arrives and circumstances change. In effect, syndicated loan agreements are more like public debt—which is difficult to renegotiate—than a traditional bank loan.

And when the firm actually has public debt—even just a little—bank debt is no longer so easy to negotiate when a firm is in financial distress. Consider Q Continuum Castings, which has sales of \$250 million.¹² Its only bank is Mostly Derivatives Bancorp (MDB), which provides Q with most of its short-term financing. In 1987 Q issued its first public debt, following many other middle market firms that had entered public debt markets for the first time. The debt was used to finance the purchase of a small HMO, a testament to Q's forward-looking management, but a business outside Q's core market. This public debt represents only about 15 percent of Q's total debt financing, and MDB holds virtually all of the rest of Q's debt.

For two years, sales of castings have been lagging while the HMO business has been booming. But since the HMO is only a small part of Q's businesses, it now appears that the firm will default on its loans to MDB unless it can somehow reduce its debt payments. Q has already entered negotiations with MDB, be-

cause its current ratio (working capital divided by total assets) has fallen below the minimum specified in its loan agreements, placing the company in *technical default*. As is common in loan contracts, a technical default must be remedied within 60 days, or MDB has the right to demand immediate repayment of the loan.

During negotiations, Q argues that the doll-drum in the castings market are only temporary and also notes that its HMO subsidiary is doing very well. The firm asks MDB to transform half of its short-term loans into long-term loans with lower face value and to exchange the remainder for a substantial share of Q's stock.

Even a small amount of public debt creates a conflict between the interests of the bank and those of the firm's bondholders.

These changes would have the effect of reducing Q's current interest payments and postponing payments to the bank to the future, which the firm is convinced will be brighter.

MDB agrees that the long-term prospects in the castings market are reasonably favorable, but it makes a counterproposal. First, all of Q's public bondholders must exchange one-half of *their* bonds for stock. Second, the bank will allow Q to stretch out its short-term loan payments, but it will not reduce the face value of its debt. Third, MDB demands that Q sell off the HMO and use the proceeds from the sale to retire some of its bank debt. Finally, the bank demands a first lien on the machines used to produce castings, that is, Q's casting equipment will now serve as collateral for the bank's loans.

The bank explains both its refusal to accept the company's offer and its own counteroffer as follows. The pain must be shared among all claimants, and it is not the bank's responsibility to bail out Q's bondholders. If the bank writes down the face value of the debt and receives stock in exchange, Q's bondholders will

¹²The story of Q is based on numerous articles, but it relies most heavily on a pair of significant papers by Christopher James. These articles contain extensive bibliographies and good discussions of the previous empirical work on banks' role in debt renegotiations for financially distressed firms.

be receiving substantial interest payments while the bank waits for Q's finances to improve enough to begin paying dividends. And in the worst possible case, if Q does not recover and enters bankruptcy, the bank's claim would be subordinate to those of bondholders. This means that the bondholders would be paid off, while the bank would be left with an equity share that may turn out to have little or no value. By forcing Q to sell its valuable HMO subsidiary to retire bank debt and by taking collateral in the castings business, MDB guarantees that it will recover at least some of its investment, even in this worst possible case.

Although Q's management and its public bondholders feel that MDB is taking an unreasonably harsh stance, they have little choice but to accept. As a result of these renegotiations with MDB, Q does avoid the bankruptcy courts, which usually eat up valuable resources like management time and attention, not to mention expenses such as court and lawyers' fees. Yet, the firm has lost its prized jewel (the HMO), and Q's bondholders have been forced to shoulder a disproportionate share of the concessions.

The first lesson of the story of Q is that even a small amount of public debt creates a conflict between the interests of the bank and those of the firm's bondholders. The source of this conflict is that the bondholders are the primary beneficiaries if the bank takes a conciliatory stance in debt renegotiations—for example, by taking equity in the firm or forgiving principal payments. The firm's public debt tends to *harden* its bank's bargaining position, as the bank makes sure that it does not bail out the firm's bondholders by making concessions.

However, the second lesson is that Q's primary reliance on bank loans *does* ease negotiations to avoid a costly bankruptcy. After all, it would have been much more difficult for Q to achieve an agreement with the bondholders alone. MDB is well informed about Q's finances because of its relationship with the firm, and one-on-one negotiations between two well-in-

formed parties—Q's and MDB's managers—are likely to be better organized and less fractious than negotiations with bondholders. Even though the bondholders realize that MDB's interests and their own conflict, they also know that as Q's main creditor the bank stands to lose a lot if it permits the firm to continue operations and Q ultimately fails. MDB's willingness to renegotiate, rather than pull the plug and demand immediate repayment, signals to Q's bondholders the bank's informed belief that the firm is more valuable as an ongoing business. This makes them more likely to exchange their debt for stock.¹³

CONCLUSION

The empirical literature of the last 10 years has uncovered some interesting lessons about the advantages and disadvantages of relationship lending and about the ways that lending relationships change as competitive conditions facing a firm change. Where firms have limited financing choices—for example, small firms—relationship lending generates real benefits. Relationship lending is characterized both by close monitoring of the firm by the bank and by contractual flexibility. The possibility of long-term lending relationships may make it easier for small, risky firms to borrow outside funds, but firms inevitably seek out more diversified funding sources when these become available. Indeed, a firm's prior relationship with a bank makes it easier for the firm to gain access to public securities markets, and even when the firm can issue public securities, bank relationships continue to play a role. For all but the large-

¹³In his 1995 study, James also finds that bank equity participation in a debt restructuring is associated with superior performance by the firm over the succeeding three years. This finding is tantalizing, but it is particularly difficult to disentangle the direction of causality. Did the bank take equity because of the firm's superior prospects, or did the firm prosper because the bank took equity?

est firms, banks continue to have an informational advantage that markets recognize. But diversification of funding sources severely limits the bank's willingness to be flexible when firms enter financial distress, even when firms

have only small amounts of public debt. Nonetheless, a close relationship with a bank does increase the likelihood of successful renegotiation when a firm enters financial distress.

REFERENCES

- Berger, Allen N., and Gregory F. Udell, "Relationship Lending and Lines of Credit in Small Firm Finance," *Journal of Business*, 68, 1995, pp. 351-81.
- Bhattacharya, Sudipto, and Anjan V. Thakor, "Contemporary Banking Theory," *Journal of Financial Intermediation*, 3, 1993, pp. 2-50.
- Billet, Matthew T., Jon A. Garfinkel, and Mark J. Flannery, "The Effect of Lender Identity on a Borrowing Firm's Equity Return," *Journal of Finance*, 50, 1995, pp. 699-718.
- "Forum on the Effects of Violating Debt Covenants," in *The Accounting Review*, 68, April 1993, pp. 219-303.
- James, Christopher M., "When Do Banks Take Equity? An Analysis of Bank Loan Restructurings and the Role of Public Debt," *Review of Financial Studies*, 8, 1995, pp. 1209-34.
- James, Christopher M., "Bank Debt Restructurings and the Composition of Exchange Offers in Financial Distress," *Journal of Finance*, 51, 1996, pp. 711-28.
- James, Christopher M., and Peggy Weir, "Borrowing Relationships, Intermediation, and the Cost of Issuing Public Securities," *Journal of Financial Economics*, 28, 1990, pp. 149-71.
- Mester, Loretta J., "Banking and Commerce: A Dangerous Liaison?" *Business Review*, Federal Reserve Bank of Philadelphia, May/June 1992, pp. 17-29.
- Nakamura, Leonard I., "Recent Research in Commercial Banking: Information and Lending," *Financial Markets, Institutions, and Instruments*, 2, 1993, pp. 73-88.
- Petersen, Mitchell, and Raghuram Rajan, "The Benefits of Lending Relationships: Evidence from Small Business Data," *Journal of Finance*, 49, 1994, pp. 3-37.
- Petersen, Mitchell, and Raghuram Rajan, "The Effect of Credit Market Competition on Lending Relationships," *Quarterly Journal of Economics*, 1995, pp. 407-43.
- Preece, Diana, and Donald J. Mullineaux, "Monitoring, Loan Renegotiability, and Firm Value: The Role of Lending Syndicates," *Journal of Banking and Finance*, 1996, pp. 577-94.
- Slovin, Myron, and John E. Young, "Bank Lending and Initial Public Offerings," *Journal of Banking and Finance*, 1990, pp. 729-40.